

Date: Thursday, 6/29/2006 8:27:58 AM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : SADDLE FITTING, FWD (OUTBOARD/INBOARD)  
 Job Number : 27762  
 Estimate Number : 10531  
 P.O. Number : N/A Part Number : D2572  
 This Issue : 6/29/2006 S.O. No. : N/A Drawing Number : D2572 REV E  
 Prsht Rev. : NC Project Number : N/A  
 First Issue : N/A Type : MACHINED PARTS Drawing Revision : E  
 Previous Run : 27057 Material : N/A  
 Due Date : 7/15/2006 Qty: 16 Um: Each  
 Written By : [Signature]  
 Checked & Approved By : [Signature]  
 Comment : Est: 1 02.10.02 Re-format; Change to Dwg Rev. D & incorporated D2572KJ

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D6101005 7075-T7351 8.25X5.0X2.5



Comment: Qty.: 1.0000 Each(s)/Unit Total : 16.0000 Each(s)  
 7075-T7351 8.25X5.0X2.5  
 Make from D6101-005 billet for D2572  
 Ensure that grain is along 5.00" length  
 Batch No: \_\_\_\_\_

1323940 x 12 x 2  
 325350 x 12 x 2

5.6/Ep

06/07/18 x16

2.0 HAAS1 HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1  
 Program Batch No. 322462 Double check by: MB 06/07/08

1-Machine Step No 1 per Folio FA051 and inspect per attached Dimension Sheets  
 2-Machine Step No 2 per Folio FA051 and inspect per attached Dimension Sheets  
 3-Machine Step No 3 per Folio FA051 and inspect per attached Dimension Sheets  
 4-Deburr and remove all machining marks  
 5-Tumble to remove shap edges.

5.6/Ep

06/07/18 x16

3.0 MILLING CONV. CONVENTIONAL MILLING MACHINE




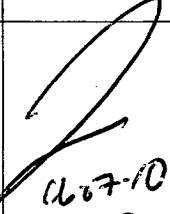
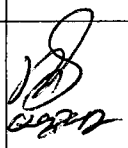
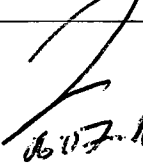
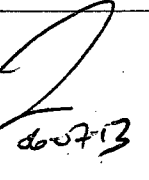
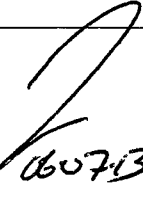
Comment: CONVENTIONAL MILLING MACHINE  
 Machine keyway as per dwg D2571 & D2572

5.6/Ep

06/07/18 x16



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR: 27762		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
06/07/09	# 2.3	one CD part SCRAP. "X" origin on fourth axis (3rd op) off by .100" first Run.		SCRAP / destroy and Replace Reset origin to correct value.	En 06/06/09	 06/07/10		 06/07/10
06/07/10	2.3	Saddle-to-skid tube hooks offset to one side 0.560 dimension is 0.484	CP 06.07.10 per QSI 642	SCRAP → <u>destroy</u> Ref DS email attached replace	En 06/07/14	 06/07/13	CP 06.07.10 per QSI 642	 06/07/13

Part No: D2572 PAR #: N/A Fault Category: PROD - CNC NCR: Yes No DQA: AS Date: 06.07.20

NOTE: Date & initial all entries

QA: N/C Closed: AS Date: 06.07.21



Date: Thursday, 6/29/2006 8:27:59 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SADDLE FITTING, FWD (OUTBOARD/INBOARD)

Job Number: 27762

Part Number: D2572

Job Number:



Seq. #:

Machine Or Operation:

Description :

4.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SG/EP 06/07/18 X16

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

SD 06.07.18 X16

6.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.1

SAP 06/07/18 X16

7.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

SC 06/07/19 (16)  
DU

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

PU 6/7/20 (16)  
A.M. 06-07-18 (16)

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 54779

PU 6/7/20 (16)

10.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

06/12/04

Job Completion



W 5/6/07/20



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 27762
<b>Description:</b> Saddle, Fwd Inboard	<b>Part Number:</b> D2572
<b>Inspection Dwg:</b> D2572 Rev. E	<b>Page 1 of 1</b>

Inspect dimensions highlighted on inspection sheet drawing D2572 Rev. E and record below:

				Recorded Actual Dimensions				By	Date
Dim	Min	Max	Go/No Go Gauge	1	2	3	4		
A	0.438	0.443	DT8682	0.441	0.441	0.441	0.441		
B	1.745	1.755		1.747	1.747	1.746	1.747		
C	3.495	3.505		3.497	3.498	3.497	3.497		
D	1.745	1.755		1.747	1.747	1.746	1.747		
E	7.990	8.010		8.000	8.000	8.001	8.000		
F	0.490	0.510		0.492	0.493	0.494	0.493		
G	0.257	0.262	DT8683	0.259	0.257	0.259	0.257		
H	0.375	0.380	DT8684	0.377	0.377	0.377	0.377		
I	0.490	0.510		0.492	0.494	0.495	0.496		
J	1.174	1.184		1.178	1.178	1.178	1.179		
K	0.558	0.578		0.560	0.561	0.562	0.563		
L	1.174	1.184		1.178	1.178	1.179	1.180		
M	1.490	1.500		1.493	1.494	1.495	1.497		
N	2.495	2.505		2.499	2.498	2.497	2.498		
O	3.869	3.879		3.870	3.871	3.872	3.874		
P	0.115	0.135		0.124	0.125	0.124	0.125		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.253	0.254	0.254	0.252		
S	0.115	0.135		0.120	0.124	0.119	0.120		
T	0.178	0.198		0.188	0.189	0.188	0.188		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		0.238	0.237	0.238	0.237		
W	0.115	0.135		0.125	0.124	0.123	0.124		
X	0.307	0.312		0.310	0.310	0.310	0.310		
Y	0.760	0.765		0.765	0.765	0.765	0.765		
Z	0.352	0.372		0.358	0.359	0.361	0.364		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.619	0.620	0.621	0.624		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.244	0.244	0.244	0.241		
AE	1.375	1.395		1.385	1.384	1.385	1.384		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.260	0.260	0.260	0.260		
AH	0.240	0.260		0.248	0.247	0.248	0.247		
AI	2.000	2.020		N/A	N/A	N/A	N/A		
AJ	0.023	0.043		0.030	0.030	0.030	0.030		
Accept/Reject									

Measured by: <u>EN/SG</u>
Date: <u>06/07/10</u>

Audited by: <u>SD</u>
Date: <u>06.07.13</u>

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	



<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 27762
<b>Description:</b> Saddle, Fwd Inboard	<b>Part Number:</b> D2572
<b>Inspection Dwg:</b> D2572 Rev. E	<b>Page 1 of 1</b>

Inspect dimensions highlighted on inspection sheet drawing D2572 Rev. E and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	0.438	0.443	DT8682	0.440	0.440	0.440	0.440		
B	1.745	1.755		1.749	1.748	1.747	1.745		
C	3.495	3.505		3.501	3.499	3.497	3.499		
D	1.745	1.755		1.748	1.747	1.746	1.745		
E	7.990	8.010		8.001	8.001	8.006	8.000		
F	0.490	0.510		0.501	0.501	0.500	0.492		
G	0.257	0.262	DT8683	0.258	0.258	0.258	0.258		
H	0.375	0.380	DT8684	0.376	0.376	0.376	0.376		
I	0.490	0.510		0.500	0.501	0.500	0.494		
J	1.174	1.184		1.180	1.180	1.179	1.175		
K	0.558	0.578		0.568	0.568	0.567	0.561		
L	1.174	1.184		1.174	1.179	1.178	1.175		
M	1.490	1.500		1.497	1.498	1.496	1.492		
N	2.495	2.505		2.499	2.501	2.500	2.498		
O	3.869	3.879		3.874	3.873	3.874	3.872		
P	0.115	0.135		0.130	0.128	0.127	0.126		
Q	0.115	0.135		0.128	0.126	0.121	0.135		
R	0.240	0.260		0.251	0.252	0.251	0.252		
S	0.115	0.135		0.125	0.124	0.122	0.123		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	2.940	2.980		2.961	2.960	2.961	2.960		
V	0.230	0.250		0.240	0.241	0.240	0.237		
W	0.115	0.135		0.130	0.128	0.127	0.126		
X	0.307	0.312		0.309	0.310	0.309	0.310		
Y	0.760	0.765		0.761	0.761	0.761	0.761		
Z	0.352	0.372		0.364	0.364	0.365	0.367		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.630	0.629	0.626	0.622		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.244	0.244	0.244	0.246		
AE	1.375	1.395		1.388	1.389	1.387	1.386		
AF	0.115	0.135		0.134	0.135	0.135	0.135		
AG	0.240	0.280		0.240	0.241	0.240	0.260		
AH	0.240	0.260		0.250	0.252	0.253	0.247		
AI	2.000	2.020		N/A	N/A	N/A	N/A		
AJ	0.023	0.043		0.033	0.033	0.033	0.033		
Accept/Reject									

Measured by:	J.G./EP
Date:	06.07.13

Audited by:	SD
Date:	06.07.13

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	



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				Recorded Actual Dimensions					
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	By	Date
A	0.438	0.443	DT8682	0.441	0.441	0.441	0.441		
B	1.745	1.755		1.745	1.748	1.745	1.745		
C	3.495	3.505		3.497	3.498	3.497	3.498		
D	1.745	1.755		1.745	1.748	1.745	1.745		
E	7.990	8.010		7.999	8.001	8.000	7.999		
F	0.490	0.510		0.493	0.491	0.496	0.495		
G	0.257	0.262	DT8683	0.259	0.259	0.259	0.259		
H	0.375	0.380	DT8684	0.377	0.377	0.377	0.377		
I	0.490	0.510		0.495	0.497	0.498	0.499		
J	1.174	1.184		1.175	1.175	1.178	1.177		
K	0.558	0.578		0.563	0.565	0.564	0.560		
L	1.174	1.184		1.175	1.175	1.178	1.177		
M	1.490	1.500		1.490	1.494	1.491	1.491		
N	2.495	2.505		2.495	2.497	2.495	2.496		
O	3.869	3.879		3.871	3.872	3.870	3.873		
P	0.115	0.135		0.124	0.124	0.124	0.126		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.251	0.252	0.252	0.249		
S	0.115	0.135		0.123	0.122	0.123	0.123		
T	0.178	0.198		0.188	0.188	0.188	0.188		
U	2.940	2.980		2.966	2.960	2.960	2.960		
V	0.230	0.250		0.235	0.237	0.239	0.238		
W	0.115	0.135		0.130	0.129	0.131	0.128		
X	0.307	0.312		0.310	0.310	0.310	0.310		
Y	0.760	0.765		0.765	0.765	0.765	0.765		
Z	0.352	0.372		0.360	0.365	0.362	0.362		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.621	0.622	0.621	0.624		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.245	0.247	0.244	0.244		
AE	1.375	1.395		1.384	1.384	1.384	1.387		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.260	0.260	0.260	0.260		
AH	0.240	0.260		0.249	0.246	0.248	0.247		
AI	2.000	2.020		n/a	n/a	n/a	n/a		
AJ*	0.023	0.043		0.030	0.030	0.030	0.030		
Accept/Reject									

Measured by: ER
Date: 06/07/14

Audited by: SD
Date: 06.07.18

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	



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B	1.745	1.755		1.747	1.746	1.746	1.745		
C	3.495	3.505		3.499	3.498	3.497	3.498		
D	1.745	1.755		1.748	1.747	1.746	1.746		
E	7.990	8.010		8.001	8.000	8.000	8.002		
F	0.490	0.510		0.501	0.499	0.498	0.499		
G	0.257	0.262	DT8683	0.259	0.257	0.257	0.257		
H	0.375	0.380	DT8684	0.377	0.377	0.379	0.377		
I	0.490	0.510		0.501	0.499	0.498	0.497		
J	1.174	1.184		1.180	1.179	1.180	1.180		
K	0.558	0.578		0.569	0.568	0.567	0.568		
L	1.174	1.184		1.179	1.179	1.180	1.179		
M	1.490	1.500		1.499	1.498	1.497	1.497		
N	2.495	2.505		2.498	2.497	2.496	2.495		
O	3.869	3.879		3.869	3.869	3.869	3.869		
P	0.115	0.135		0.122	0.124	0.123	0.124		
Q	0.115	0.135		0.135	0.135	0.135	0.135		
R	0.240	0.260		0.250	0.248	0.247	0.248		
S	0.115	0.135		0.120	0.124	0.125	0.124		
T	0.178	0.198		0.188	0.188	0.188	0.182		
U	2.940	2.980		2.960	2.960	2.960	2.960		
V	0.230	0.250		0.236	0.237	0.236	0.237		
W	0.115	0.135		0.124	0.125	0.126	0.125		
X	0.307	0.312		0.310	0.310	0.310	0.310		
Y	0.760	0.765		0.765	0.765	0.765	0.765		
Z	0.352	0.372		0.365	0.364	0.363	0.364		
AA	0.470	0.530		0.500	0.500	0.500	0.500		
AB	0.615	0.635		0.628	0.624	0.623	0.621		
AC	0.053	0.073		0.063	0.063	0.063	0.063		
AD	0.240	0.260		0.250	0.244	0.247	0.246		
AE	1.375	1.395		1.384	1.384	1.383	1.384		
AF	0.115	0.135		0.135	0.135	0.135	0.135		
AG	0.240	0.280		0.260	0.260	0.260	0.260		
AH	0.240	0.260		0.251	0.249	0.248	0.247		
AI	2.000	2.020		N/A	N/A	N/A	N/A		
AJ	0.023	0.043		0.030	0.030	0.030	0.030		
Accept/Reject									

Measured by: J.G.
Date: 06/07/15

Audited by: S.A.
Date: 06.07.18

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	02.09.24	Re-format; Added Rev. D	KJ	
C	02.10.11	Re-format; Added DT8682, DT8683, DT8684	KJ	
D	05.05.05	Added dimension AI	KJ/RF	
E	05.12.05	Added dimension AJ	KJ/JLM	

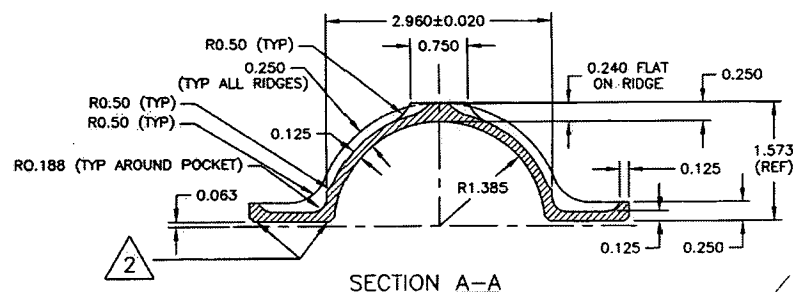
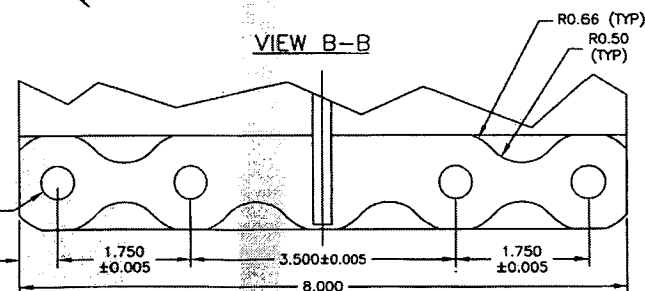


05.12.06 ~~11~~

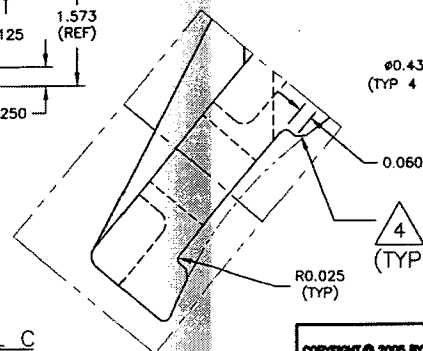





MATERIAL: 7075-T7351 (QQ-A-250/12)  
(REF DART SPEC. D6102-003)  
FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1  
POWDER COAT GLOSS WHITE (REF 4.3.5.1) PER  
DART QSI 005 4.3  
BREAK ALL SHARP EDGES 0.010 TO 0.020  
TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- 1 ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO MAX DEPTH OF 0.010
- 2 CHAMFER 0.063" x 45° AROUND THIS SURFACE (TYPICAL 2 PLACES)
- 3 CHAMFER 0.063 x 45° ALL AROUND
- 4 CHAMFER 0.033 x 45° (SEE DETAIL C)



DETAIL C  
SCALE 2:1



E	05.07.13	ADD CHAMFER ON RIDGE NOTE 4	
D	02.09.06	ADD RIDGES; TIGHTEN TOLERANCES	
C	99.10.22	INCORP. DEO 9123/9079/9102 ADD DIMENSIONS PER TSR A1177	
B	96.12.02	ADD GRAIN DIR., 0.438 WAS 0.425	
A	96.09.16	NEW ISSUE	
DESIGN		DRAWN BY	
DS	PH		DART AEROSPACE LTD. HAMMERSLEY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.	REV. E
		D2572	SHEET 1 OF 1
DATE		TITLE	SCALE
05.07.13		INNER FWD SADDLE	2:3

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## DESIGN

**CHECK**

DATE \_\_\_\_\_

05.07.13

**DRAWN**

APPROX

\_\_\_\_\_

**Source:** U.S. Census Bureau, Current Population Reports.

**DART**

DRAWING NO  
D2572

TITLE	INNER FWD SADDLE
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**DART AEROSPACE LTD.**  
LAMBERTON, ONTARIO, CANADA

REVISIONS

SHEET 1 OF 1

DDLE

6301 COPY  
RETURN TO  
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SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 27762



**Chris Provencal**

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**From:** David Shepherd [dshepherd@dartaero.com]  
**Sent:** July 10, 2006 2:25 PM  
**To:** 'Chris Provencal'  
**Subject:** RE: NCR 205 Saddles

I agree. Scrap them.

David

---

**From:** Chris Provencal [mailto:cprovencal@dartaero.com]  
**Sent:** Monday, July 10, 2006 11:30 AM  
**To:** David Shepherd (David Shepherd)  
**Cc:** 'Serge Shahbazian'  
**Subject:** NCR 205 Saddles

David:

D2572 Saddle, the saddle-to-skidtube holes are offset 0.016" to one side.

D2571 Saddle, the saddle-to-skidtube holes are offset 0.025" to one side.

I would be tempted to scrap them, at least the 0.025" one because I know how hard it is already to assembly the bushings into the saddles and have everything line up.

-Chris

10/07/2006



